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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/747,945

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EXAMINER

MOREHEAD, JOHN H

ART UNIT

PAPER NUMBER

2622

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/747,945	Applicant(s) PARK, SE WOONG	
	Examiner John Morehead	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 10, 14, 17, 18, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 6 and 17 both claim "about  $11.8 \pm 1$  mm." Claims 10, 14 and 18 claim "about 20-70 cm." MPEP 2173.05 (b) section F

4. *The phrases "relatively shallow," "of the order of," "the order of about 5mm," and "substantial portion" were held to be indefinite because the specification lacked some standard for measuring the degree intended and, therefore, properly rejected as indefinite under 35 U.S.C. 112, second paragraph. Ex parte Oetiker, 23 USPQ2d 1641 (Bd. Pat. App. & Inter. 1992).*

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-5, 7-9, 11-13, 15, 16, 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over as being unpatentable over Wada et al US 2002/0191076 in view of Kato et al US 6161583.

8. Re claim 1, Wada discloses an iris recognition camera (fig. 1), and a position sensor (fig. 1 element 24) configured to detect a position of the driving barrel (fig. 7, shows a flow chart which illustrates how the range finder, causes the cameras to move to proper position, para 0047-0053).

Wada fails to teach: a driving barrel configured to support a lens; a moving unit configured to reciprocatingly move the driving barrel perform both focus and zoom operations. However, Kato teaches a lens barrel movable between an imaging position and a retracted position that is closer to the body of the camera than the imaging position and barrel position restraint means which permits the movement of the lens barrel when the lens barrel moves to the imaging position or the retracted position and which restrains the movement of the lens barrel in the direction of the optical axis when the lens barrel has reached the imaging position (Kato col. 5 lines 32-39).

Therefore, taking the combined teachings of Wada and Kato, as a whole, it would have been obvious to one of ordinary skill in the art to combine Wada's iris recognition camera with Kato's movable lens barrel by mounting the movable lens barrel where the wide-angle lens is positioned on the iris imaging apparatus, so that upon detection of a

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user based on the ranger finder, the controller can position the wide angle lens camera by either tilting the wide angle lens left or right, or moving the drive barrel backward or forward not only to obtain the image of the person whose iris is being imaged, but also have the ability of iris imaging by the wide-angle lens based on the zooming capabilities of Kato, furthermore two sets of lens can be used for either wide-angle or telephoto purposes therefore, the telephotographic lens can also be moved into Kato's lens barrel (Kato, col. 3 lines 9-29).

Re claim 2, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition sensor according to claim 1, wherein the moving unit (Wada, fig. 3 element 20) comprises: a motor (Wada, fig. 3 element 21); a lead screw (Wada, fig. 3 element 45) connected to the motor at one end (Wada, fig. 2 and fig. 3, the tilt table 20 includes pivoting axes 20a and 20b which is coupled to the motor 21, and the screw 45 is connected to the tilt table, therefore the screw is connected to the motor); and a rack (Wada, fig. 3 element 41) coupled to an outer circumference of the lead screw.

Re claim 3, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 2, wherein the motor comprises a step motor (Wada, fig. 1 elements 20 and 21) (based on applicants specification, examiner will define step motor as: a device configured to provide an accurate rotating amount, Wada, fig. 1 element 20 is coupled to element 21, Wada para 0036, 0037 and 0043).

Re claim 4, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, wherein the driving barrel (Kato, fig. 1) is provided at one side with a detecting portion (Wada, fig. 1 element 30) configured to communicate with the position sensor (Wada, fig. 1 element 24) so that the position sensor detects a position of the driving barrel (Wada, fig. 7 para 0047-0053).

Re claim 5, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, wherein the lens comprises a wide-angle lens (Wada, fig. 1 element 25).

Re claim 7, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, further comprising one or more guide bars (Kato, fig. 1 element 6) configured to guide the driving barrel during reciprocating movement (Kato, col. 3 lines 21-27).

Re claim 8, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 7, wherein the one or more guide bars comprises a pair of guide bars (Kato, fig. 1 and fig. 2 element 6), respectively, positioned on opposite sides of the driving barrel (Kato, based on fig. 6 the movable barrel is comprised of guide bars on each side of the camera body).

Re claim 9, the combined teachings of Wada and Kato, as a whole, the iris recognition camera according to claim 1, wherein the position sensor is positioned behind the lens (Wada, fig. 1 and Kato, fig. 1, once Kato's movable barrel is mounted on Wada's iris imaging apparatus, the wide angle lens will be able to move back and forth, therefore the position sensor will be behind the lens).

Re claim 11, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, wherein the position sensor (Wada, fig. 1 element 24) comprises one of an optical sensor and a contact sensor (para 0038).

Re claim 12, the combined teachings of Wada and Kato, as a whole, further teach an iris recognition system comprising the iris recognition camera of claim 1 (claim limitation has already been discussed and rejected, see claim 1).

Re claim 13, the combined teachings of Wada and Kato, as a whole, further teach an iris recognition camera, comprising: a step motor configured to provide an accurate rotating amount; a driving barrel configured to be reciprocated by a rotational force transmitted from the step motor; and a wide-angle lens positioned on the driving barrel and configured to allow a user's image to be captured by moving the driving barrel to an appropriate image pickup location for the user (claim limitation has already been discussed and rejected, see claims 1 and 3).

Re claim 15, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 13, further comprising an image pickup device configured to perform the image pickup using light refracted by the wide-angle lens (claim limitation has already been discussed and rejected, see claim 1 and 5).

Re claim 16, the combined teachings of Wada and Kato, as a whole, further teach an iris recognition system comprising the iris recognition camera of claim 13 (claim limitation has already been discussed and rejected, see claim 1 and 13).

Re claim 20, the combined teachings of Wada and Kato, as a whole, further teach a method of operation for an iris recognition camera, comprising: detecting a user; moving a camera lens to an initial position detected by a position sensor after the position sensor detects the user; moving the camera lens to an image pickup location where a user's iris can be captured; and performing the image pickup using an image pickup device (Wada, fig. 7).

Re claim 21, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the camera lens comprises a wide-angle lens (claim limitation has already been discussed, see claim 18).



Re claim 22, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the image pickup device comprises a charge-coupled device (Wada, para 0039).

Re claim 23, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the iris recognition camera comprises a driving source for moving the lens in the form of a step motor (claim limitation has already been discussed and rejected, see claim 3).

Re claim 24, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the iris recognition camera further comprises a power transmission (i.e. a motor) configured to transmit power for moving the camera lens (claim limitation has already been discussed and rejected, see claim 2).

Re claim 25, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 24, wherein the power transmission device includes a lead screw configured to be rotated by power from a driving source, and rack screw-coupled to an outer circumference of lead screw (claim limitation has already been discussed and rejected, see claim 2).

Re claim 26, the combined teachings of Wada and Kato, as a whole, further teach a method of operation for an iris recognition camera, comprising: turning on

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power of an iris recognition camera; moving a lens to an initial position; detecting a user; capturing an iris image of the user by moving the lens to a location where the iris image is focused; and storing a current location of the lens (Wada, fig. 7 also para 0047-0054).

Re claim 27, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 26, wherein the initial position is detected by a position sensor (claim limitation has already been discussed and rejected, see claim 1).

Re claim 28, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 26, further comprising: comparing, when a new user is detected, the current location of the lens with current location and the appropriate an appropriate location for the lens for the new user; calculating a difference between the location; and moving the lens by the calculated difference to perform the image pickup (Wada fig. 7, also para 0048 and 0049).

Re claim 29, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 26, wherein the lens comprises a wide-angle lens (claim limitation has already been discussed and rejected, see claim 21).

9. Claims 6 and 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al US 2002/0191076 in view of Kato et al US 6161583 and in further view of Abe, 6747814.

Re claim 6, claim 6 requires the iris recognition camera according to claim 5, wherein the wide-angle lens has a focusing distance of about  $11.8 \pm 1$  mm.

The combination of Wada and Kato, as a whole, fail to teach the claim limitation as recited above in claim 6. However, Abe teaches a wide-angle lens with high quality optical characteristics that eliminates eclipsing and the like, also the total lens has a focusing distance of 12 mm. (Abe, col. 1 lines 52-54 and col. 7 lines 40-47).

Therefore taking the combined teachings of Wada and Kato, and in further view of Abe, as a whole, it would have been obvious to one of ordinary skill in the art to place Abe's wide-angle lens in Wada's iris recognition camera with Kato's movable barrel to provide a thin, compact, and light weight design that images elements with high pixel counts, thus enabling the wide-angle camera lens to also image the iris of an individual (Abe, col. 1 lines 55-58).

Re claim 17, the combined teachings of Wada and Kato in further view of Abe, as a whole, further teach an iris recognition camera, comprising: a driving motor; a wide-angle lens (Wada, fig. 1 element 25) configured to be reciprocated by power transmitted from the driving motor (Kato, fig. 1 element 8) and having a focusing distance of about  $11.8 \pm 1$  mm (Abe, col. 1 lines 55-58); and an image pickup device configured to convert

light refracted by the wide-angle lens into an image of a user's iris (claim limitations has already been discussed and rejected, see claims 1 and 6).

Re claim 19, the combined teachings of Wada and Kato in further view of Abe, as a whole, further teach an iris recognition system comprising the iris recognition camera of claim 17 (claim limitation has already been discussed and rejected, see claim 1).

10. Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al US 2002/0191076 in view of Kato et al US 6161583 and in further view of Oda et al US 6850631.

Re claim 10, claim 10 requires the iris recognition camera according to claim 1, wherein the lens has an image pickup distance range of about 20-70 cm.

The combination of Wada and Kato, as a whole, fail to teach the above limitation as recited in claim 10. However, Oda teaches an iris input device in which the focal length of the lens is fixed at a value within approximately 0.5 to 50 cm (Oda, col. 4 lines 28-29).

Therefore, taking the combined teachings of Wada and Kato, in further view of Oda, as a whole, it would have been obvious to one of ordinary skill in the art to have a lens with a pickup distance range of about 20-70 cm in order to get a proper reading of

the iris, anything less than 20 cm may cause an inaccurate reading, or cause the eye to come into contact with the iris recognition camera (Oda, col. 4 lines 28-46).

Re claim 14, the combined teachings of Wada and Kato, in further view of Oda, as a whole, further teaches the camera according to claim 13, wherein the wide-angle lens has an image pickup distance range of about 20-70 cm (claim limitation has already been discussed and rejected, see claim 10).

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al US 2002/0191076 in view of Kato et al US 6161583 and in view of Abe, 6747814 and in further view of Oda et al 6850631.

Re claim 18, claim 18 requires, the iris recognition camera according to claim 17, wherein an image pickup range of the wide-angle lens is about 20-70 cm.

The combined teachings of Wada and Kato, in further view of Abe, as a whole, fail to teach the limitation as recited above in claim 18, however, Oda teaches an iris input device in which the focal length of the lens is fixed at a value within approximately 0.5 to 50 cm (Oda, col. 4 lines 28-29).

Therefore taking the combined teaching of Wada and Kato and Abe, in further view of Oda, it would have been obvious to one of ordinary skill in the art to have a lens with a pickup distance range of about 20-70 cm in order to get a proper reading of the

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iris, anything less than 20 cm may cause an inaccurate reading, or cause the eye to come into contact with the iris recognition camera (Oda, col. 4 lines 28-46).

**Contact**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Morehead whose telephone number is 571-270-1183. The examiner can normally be reached on Monday - Friday (alt) 7:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM

4/30/07

  
NGOC YEN VU  
SUPERVISORY PATENT EXAMINER